**TUTORIAL # 6**

**Set theory, Function & Counting**

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| **Q:1** | Prove the following statement using Venn diagram. |
| **Q:2** | State and prove De Morgan’s law. |
| **Q:3** | Let for where is the set of real numbers. Find |
| **Q:4** | Find domain and range of the following functions: |
| **Q:5** | Draw graph of the following functions:  floor function |
| **Q:6** | Are the following functions one to one and onto? If yes, find its inverse. |
| **Q:7** | In how many ways five boys and five girls are to be seated in a row if  No two boys can be seated together.  John and Mary must be seated together. |
| **Q:8** | Find the number of distinct permutation that can be formed from all the letters of :  RADAR MATHEMATICS |
| **Q:9** | In Anand how many vehicle number plates are possible? |